REMARKS

Status of the Claims

Claims 52-55 are pending. Claims 52-55 are rejected.

The 35 U.S.C. §102 Rejection

Claims 52-55 stand rejected under 35 U.S.C. §102(b) as being anticipated by **Mitsui** *et al* (Eur J Biochem 260: 627-634, 1999). Applicants respectfully traverse this rejection.

On page 3 of the Final Office Action, the Examiner discusses the following reasons for maintaining this rejection. First, that the reference human type 2 neuropsin taught by **Mitsui** *et al* is 100% identical to the claimed TADG-14 protein variant with an amino acid sequence shown in SEQ ID NO: 75 as well as cDNA encoding such protein (pg. 628, Fig. 2, as well as cDNA encoding such sequence). Second, **Mitsui** *et al* teach DNA that include an intron sequence between exon 2 and exon 3, where the DNA encodes a human neuropsin type 2 that has an amino acid sequence that is 100% identical to TADG-14 variant having the amino acid sequence of SEQ ID NO: 75 (nucleic acid sequence on pg. 630, col. 1, Fig. 4A). Third, **Mitsui** *et al* teach a vector such as BAC-TO-BAC comprising the regulatory elements necessary for expressing the reference protein in host cell such as insect cell (pg. 629, col. 2). Hence, the Examiner

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maintains the rejection of the instant claims. Applicants respectfully disagree with the Examiner.

The instant claim 52 is drawn to an isolated DNA that differs from the nucleic acid sequence of SEQ ID NO: 6 due to inclusion of an intron sequence between exon 2 and exon 3 of SEQ ID NO: 6. Such a DNA encodes a TADG-14 protein variant that has an amino acid sequence of SEQ ID NO: 75. Thus, the instant claim is drawn to a **DNA sequence** that encodes a protein of SEQ ID NO: 75. The instant specification discloses detection of a TADG-14 variant sequence on examination of the complete transcript of TADG-14 gene. As a result of this inclusion, the protein identified as the one with SEQ ID NO: 75 that was translated therefrom had an extended amino acid sequence (Example 3, Figs. 10, 11).

In distinct contrast, **Mitsui** *et al* disclose the nucleotide and amino acid sequences of neuropsin. Although **Mitsui** *et al* teach insertion of exon 2 and 3 in the nucleotide sequence of neuropsin (Figure 4A), this nucleotide sequence of neuropsin is not the same as SEQ ID NO: 6. Moreover, the instant specification discloses that there are differences between TADG-14 and neuropsin at the nucleotide level (pg. 48, lines 6-14).

In order to anticipate a claim, the prior art must teach each and every element of the claim. The instant claim 52 **is drawn** to an isolated DNA

that differs from SEQ ID NO: 6 due to inclusion of an intron sequence and encodes a protein of SEQ ID NO: 75 and **not drawn** to the protein of SEQ ID NO: 75. Applicants submut that **Mitsui** *et al* does not teach the same DNA sequence as claimed herein for reasons discussed supra. Hence, **Mitsui** *et al* do not teach each and every element of the instant claim 52 and thus, claim 52 is not anticipated by **Mitsui** *et al*. For the same reasons, claims 53-55 that depend from claim 52 are not anticipated by **Mitusi** *et al*. Accordingly, based on the claim amendments and remarks, Applicant respectively requests the withdrawal of the rejection of claims 52-55 under 35 U.S.C. §102(b).

This is intended to be a complete response to the Final Office Action mailed January 23, 2008. Applicants submit that the pending claims are in condition for allowance. If any issues remain outstanding, please telephone the undersigned attorney of record for immediate resolution.

Respectfully submitted,

Date: Apr 15, 2008

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